

Exhibit 2

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

UNITED STATES OF AMERICA,

Plaintiff,

v.

Case No. 1:20-cr-00143

ZACKARY ELLIS SANDERS,

Defendant.

5th Declaration of Dr. Matthew Miller

I, Dr. Matthew Miller, declare under the penalty of perjury that:

1. I am a Security Consultant at Leviathan Security Group. I was previously employed as a professor of Computer Science at the University of Nebraska at Kearney. A copy of my updated CV is provided to the Court as Exhibit A.
2. I have expertise in Computer Science, Tor, and law enforcement techniques that have been used to identify users of the Tor Network. I have previously provided 4 declarations to the Court in this case.
3. A homepage of a website is the first and potentially only page that a user would access on a website. Just as a window shopper browsing storefronts will at minimum (but potentially at most) look at the storefront display case, an Internet user browsing websites will at minimum (but potentially at most) access the homepage.
4. It is common for websites to provide different content for registered users compared to the content for non-registered users, but the homepage for all users would be the same. This is true for many websites, like Facebook.com, Twitter.com and Amazon.com. [REDACTED], accessing the homepage is analogous to viewing a store front display case, where the store (the website) requires patrons to register a membership (register a username and password) to enter the store (login) and see what is inside (click on password protected pages). The store front display case (the homepage) does not allow the patrons (Internet users) to see what is inside the store (password protected content).
5. If an Internet user just accesses the homepage of a website, they cannot see the password protected pages beyond the homepage of the website. To view the password protected pages, the Internet user needs to register an account and login. After logging in the Internet user would need to take additional steps to view specific content. Internet users

have the option to visit various pages, each with different content. For example, if an Internet user browses to Facebook, they can register for an account with a username, password. Once they have registered, they can then login to the Facebook website to view content only visible after logging in.

6. A search engine only has access to the publicly available pages of a website. Any pages that require a login are not accessible to the search engine. In the example of the storefront, a search engine would only be able to access the information shown in the display case of the store, not the information shown to patrons with a membership once they are inside the store. Search results for the target website's homepage, from search engines such as Torch (or other Tor search engines), would have included text from the homepage and not the pages that require a username and password. For example, the [REDACTED] were password protected and the search engine would have not been able to access or display the content on those pages.
7. On December 18, 2020, I received and reviewed two additional screenshots provided by the government of the target website. In late July 2020, I reviewed 4 other screenshots provided by the government, none of which depicted the homepage and 3 of which depicted content after a user had registered an account and logged in. None of this password protected content would have been accessible to a search engine or a user that was not logged in to the website. One of the screenshots I reviewed on December 18, 2020, was of the homepage and the other screenshot was of another page that a user could access without logging in.

DONE this 22nd day of December 2020.



Dr. Matthew Miller